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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,683	02/05/2004	Yih Chang	JCLA6090D-CIP	7808
23900	7590	04/03/2007	EXAMINER	
J C PATENTS, INC.			MARKOFF, ALEXANDER	
4 VENTURE, SUITE 250				
IRVINE, CA 92618				
			ART UNIT	PAPER NUMBER
			1746	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/03/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No. 10/773,683	Applicant(s) CHANG ET AL.	
	Examiner Alexander Markoff	Art Unit 1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 9-20 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 2-7 and 9-16 of U.S. Patent No. 6,613,156.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the scope of the claims of the patent is inside of the scope of the claims of the instant application and because the combination of the claims of the patent discloses the claimed limitations.

3. Claims 1-8 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6,709,532.

Although the conflicting claims are not identical, they are not patentably distinct from

each other because the scope of the claims of the patent is inside of the scope of the claims of the instant application.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-8 are indefinite because the term "the surface" in line 7 of claim 1 lacks proper antecedent basis.

Claims 2-7 are indefinite because the term "the liquid" in all these claims lacks proper antecedent basis.

Claim 8 is indefinite because the term "the n-butyl acetate reaction chamber" lacks proper antecedent basis.

Claims 9-17 are indefinite because the term "the sequence" in claim 9 lacks proper antecedent basis.

Claims 13 and 14 are indefinite because it is not clear what is referenced as " a serial configuration, a parallel configuration or a mixture of bath". What is referenced by configuration? What is referenced as a mixture of bath?

These claims are further not clear not clear in view of the fact that claim 12 requires at least one n-butyl acetate stripping bath and at least one IPA stripping bath. How can one bath form a serial or parallel configuration?

Claim 17 is indefinite because the term "the cleaning baths" lack proper antecedent basis.

Claims 18-20 are indefinite because the term "the surface " in claim 18 lacks proper antecedent basis.

Claim 20 is indefinite because the term "the sequence" lacks proper antecedent basis.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the state of the prior art admitted by the applicants in the specification in view of Tsang et al (US Patent No 5,262,279), Iwata et al (US Patent 5,817,441) and Nemelka (US Patent No 6,153,075).

The applicants admitted in the specification that OLED panels recited by the claims are the panels with a polyimide layer.

On the other hand Tsang et al teach that removing of photoresist from a substrate with a polyimide layer is conventionally conducted by sequentially dipping in two n-butyl acetate bathes and an IPA bath, followed by rinsing with water and drying. Column 1, line 45 – column 2, line 6.

It would have been obvious to an ordinary artisan at the time the invention was made to apply a conventional method and use a conventional apparatus disclosed by Tsang et al for their primary purpose to remove photoresists from any substrate with a polyimide layer, including the OLED panels substrates with reasonable expectation of adequate results.

Tsang et al do not specifically teach the use of an air-knife or a blow-dry unit for drying. They teach the use of spin-drying.

However, air-knife and blow-drying were known alternatives for spin-drying, as evidenced by Iwata et al and Nemelka.

It would be obvious to an ordinary artisan at the time the invention was made to use air-knife/blow-drying means/step in the method and apparatus of Tsang et al with reasonable expectation of adequate results because Iwata et al and Nemelka teach such means/step as known alternative to the means/step disclosed by Tsang et al.

As for claims requiring spraying, Tsang et al do not specifically teach spraying of the chemicals used. They teach the use of dipping into the bath.

However, the use of spraying for application of chemicals to substrates was conventional and known in the art, as evidenced by Nemelka.

It would have been obvious to an ordinary artisan at the time the invention was made to utilize a conventional method of delivering a chemical to the substrate. It would have been obvious to an ordinary artisan at the time the invention was made to apply the chemicals in the method/apparatus of Tsang et al by spraying with reasonable expectation of adequate results in order to enable the delivery and to enhance the treatment by physical action of spraying because spraying was a conventional method for delivering chemicals to substrates.

As to the transporting and control units:

The examiner's position is that manipulating the substrates in the semiconductor industry is conventional automated and that thereby it would have been obvious to an ordinary artisan at the time the invention was made that the apparatus of Tsang et al obviously comprises a unit to transport the substrates between treatment bathes and stations and to enable placement and handling the substrates during the treatment and

obviously comprises a control unit to enable operation of the apparatus and enable and required treatment process.

In alternative, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide in Tsang et al a unit to transport the substrates between treatment bathes and stations and to enable placement and handling the substrates during the treatment and a control unit to enable operation of the apparatus and enable and required treatment process, since it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. In re Venner, 120 USPQ 192.

As to claim 8, which recites shuttling of the panel, the examiner's position is that such is met by immersing the panel into the bath because such would obviously require moving the panel into and out of the bath.

As to claims 10 and 11, the examiner's position is that the recited buffer region is met by a space near the bath or apparatus of Tsang et al because neither structure of the region, nor structural relationship between the region and the other parts of the apparatus are specified.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent No 5,844,363 is cited to show the state of the prior art with respect to OLED s and methods of processing of these displays. US Patent No


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5,501,943 is cited to show the state of the prior art with respect to stripping of the photoresists and processing substrates. US Patent 5,122,439 is cited to show that it was known to strip photoresists with NBA and/or IPA.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Markoff whose telephone number is 571-272-1304. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Alexander Markoff
Primary Examiner
Art Unit 1746

AM

ALEXANDER MARKOFF
PRIMARY EXAMINER